Amendment to Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

What is Claimed:

1. (Currently amended) A field-of-view illuminator, comprising;

a variable illuminator responsive to a signal to direct a first beam to a plurality of locations in a field of view,

a detector aligned to receive energy scattered from the first beam, and

an electronic controller operatively coupled to said detector and said variable illuminator, the electronic controller operative to automatically vary the power of the first beam inversely proportionally to the received energy

wherein said variable illuminator includes;

a beam source responsive to a signal to produce a second beam, and

a mirror aligned to deflect the second beam, forming the first beam that scans across the field of view.

2. (Cancelled)

3. (Original) The field-of-view illuminator of claim 1, further comprising;

a frame buffer operable to contain values for driving said variable illuminator,

a leveling circuit operatively coupled to said detector and said frame buffer, the leveling circuit being responsive to the detector to modify the values in said frame buffer.

4. (Original) The field-of-view illuminator of claim 3 wherein the leveling circuit is operative to increase the output of said variable illuminator to locations that scatter relatively low amounts of energy.

5. (Original) The field-of-view illuminator of claim 3, wherein said leveling circuit is operative to decrease the output of said variable illuminator to locations that scatter relatively high amounts of energy.

6. (Original) The field-of-view illuminator of claim 1, wherein variable illuminator is responsive to a signal to modulate its output to produce substantially uniform detected energy across the field of view and the image in the field of view is substantially represented by the inverse of a frame buffer in said controller.

7. (Currently amended) A method for illuminating a field-of-view, comprising the steps of;

illuminating a plurality of spots in a field of view with a first illumination pattern,

measuring the energy scattered from each of the plurality of spots in response to the first illumination pattern,

responsive to said measurement, automatically determining a second illumination pattern corresponding to a reduced range of scattered light energy, and

illuminating the plurality of spots with the second illumination pattern;

wherein said step of determining a second illumination pattern corresponding to a reduced range of scattered light energy, further comprises the steps of;

inverting the pattern of measured scattered energies from the plurality of spots, and

adding the inverted pattern of measured scattered energies to the first illumination pattern to produce the second illumination pattern.

8. (Original) The method for illuminating a field-of-view of claim 7, wherein the process of illuminating, measuring and adjusting the illumination pattern is repeated until the range of scattered light energy is reduced to a desired range.

9. (Original) The method for illuminating a field-of-view of claim 8, wherein the desired range of scattered light energy is one that falls substantially within the dynamic range of a detector.

10. (Cancelled)

11. (Currently amended) A method for illuminating a field-of-view, comprising the steps of;

illuminating a plurality of spots in a field of view with a first illumination pattern,

measuring the energy scattered from each of the plurality of spots in response to the first illumination pattern,

responsive to said measurement, automatically determining a second illumination pattern corresponding to a reduced range of scattered light energy, and

illuminating the plurality of spots with the second illumination pattern;

wherein said step of determining a second illumination pattern corresponding to a reduced range of scattered light energy, further comprises the steps of;

inverting the pattern of measured scattered energies from the plurality of spots,

adjusting the magnitude of the inverted pattern of measured scattered energies from the plurality of spots corresponding to an adjustment gain, and

adding the adjusted inverted pattern of measured scattered energies to the first illumination pattern to produce the second illumination pattern.

12. (Currently amended) A scanned beam imager, comprising;

a frame buffer operative to produce a source signal,

an emitter responsive to the source signal to emit a modulated beam of electromagnetic energy,

a scanner positioned to receive the modulated beam of electromagnetic energy and operative to scan the beam across a field-of-view,

a detector aligned to detect modulated electromagnetic energy scattered from the field-of-view and operative to produce a detection signal responsive to the detected modulated electromagnetic energy, and

a controller coupled to said detector and said frame buffer, said controller being responsive to the detection signal to adjust values in said frame buffer;

wherein said controller is operative to converge said frame buffer such that at least a portion of image information from the field-of-view may exist as frame buffer data.

13. (Original) The scanned beam imager of claim 12, wherein the field-of-view is two-dimensional.

14. (Original) The scanned beam imager of claim 12, wherein said controller further comprises;

a bar code decoder.

15. (Original) The scanned beam imager of claim 12, wherein said controller further comprises;

a leveling circuit operative to load values into said frame buffer responsive to the amount of electromagnetic energy received by said detector.

16. (Cancelled)

17. (Currently amended) The scanned beam imager of claim ~~16~~ 12, wherein;

the frame buffer is operative to converge such that substantially all the image information from said field-of-view exists as frame buffer data.

18 - 40. (Cancelled)